

**REMARKS**

Claims 1-5, 8-20, 22-24, and 26-43 are pending this application. By this amendment, the specification is amended, claims 6, 7, 20, 21, and 25 are canceled, claims 1, 2, 4, 5, 8, 12, 14, 16, 17, and 26 are amended, and new claims 27-43 are added. Reconsideration and withdrawal of the rejections are respectfully requested in view of the foregoing amendments of the following remarks.

The restriction requirement with regard to claims 6, 7, 20, 21, and 25 has been made final. Therefore, these claims have been canceled.

The Patent Office objects to the drawings under 37 C.F.R. § 1.83(a). Specifically, the Patent Office asserts that the claimed features "information relative to a display type of a video signal embedded in a vertical sync signal" and "embedding the divided display type information into the vertical sync signal" must be shown in the figures.

Applicant has amended the claims to remove these features. It is believed that the drawings comply with the requirements of 37 C.F.R. §1.83(a). Withdrawal of this objection is respectfully requested.

Claims 8, 15, 16, and 26 stand objected to based on various informalities. These claims have been amended, and are believed to comply with the requirements of the Patent Office. Withdrawal of this objection is respectfully requested.

Claims 5 and 17-19 stand rejected under 35 U.S.C § 112, first paragraph, as including subject matter which is not described in the specification in such a way as to reasonably

convey to one skilled in the art that the inventor, at the time the application was filed, had possession of the claimed invention. This rejection is respectfully traversed.

Specifically, the Patent Office asserts that the specification discloses that divided display type information is embedded into the horizontal sync signal, R video signal, G video signal, and/or B video signal, and that the vertical sync signal includes the clock pulse for recognizing the display type information. Consequently, the Patent Office asserts that the feature "information relative to a display type of a video signal embedded in a vertical sync signal" is not adequately described in specification.

As an initial matter, Applicant respectfully submits that the originally filed claims constitute part of the specification. As such, the information in these claims cannot be said to be missing from the specification. Moreover, referring to page 18 of the specification, the claimed subject matter is disclosed as part of the third embodiment. Thus referring to lines 18-20, the disclosure states that "the main body also transmits to the monitor the display type information with the clock pulse for recognizing the display type information included in the vertical sync signal." Accordingly, Applicant respectfully submits that there is adequate disclosure that divided information can be transmitted with the vertical sync signal.

In an effort to clarify this feature, however, Applicant has amended the specification to more clearly recite that the divided display information can be embedded into the vertical sync signal. Because this information is fully described in the originally filed claims, Applicant believes that no new matter is added by this amendment.

Moreover, these claims have been amended and are believed to comply with the Requirements of Section 112. Because these claims comply with the requirements of Section 112, withdrawal of this rejection is respectfully requested.

Claims 1-4, 8, 12, 14, 15, 23, and 24 stand rejected under 35 U.S.C § 102(b) over Arai et al. (U.S. Patent No. 5,457,473) (hereinafter Arai). This rejection is respectfully traversed.

Arai fails to disclose all of the claimed features, as required by Section 102. For example, Arai relates to an image display apparatus that can adjust the display based on a user inputted control instruction. Referring to Figure 1, Arai discloses that the user uses an input unit 10 to provide control instructions to a computer 1a. Additionally, a display control unit 15 provides horizontal and vertical sync signals as well as RGB video signals to the control signal addition circuit 16. The control signal is then superimposed during the vertical retrace period on the RGB video signal or the sync signal. The display unit 1b receives the sync signals, the RGB video signals, and the superimposed control signal at the control signal separation circuit 18. The control signal separation circuit 18 provides the RGB video signal to the video circuit 20, the sync signals to the deflection circuit 21, and the control signal to the first display control circuit 19.

Arai, however, fails to disclose outputting a video signal and corresponding display type information. Specifically, Arai states that the control instruction is "for adjustment of the display picture in the display unit...." See column 4, lines 49-50. Moreover, Arai states that the invention relates to an image display apparatus in which a display size, a display

position, and brightness of a picture can be adjusted from an input unit. See column 1, lines 6-10. Thus, Arai discloses only providing adjustment information, and not display type information.

Moreover, Arai fails to disclose that the display type information includes a display code that designates a display type.

Consequently, because Arai fails to disclose all the claimed features, it is respectfully requested that this rejection be withdrawn.

Claims 1-4, 8, 14, 15, 17, 18, 22, 23, and 26 stand rejected under 35 U.S.C § 102(b) over Applicant's background art (hereinafter "background art"). This rejection is respectfully traversed.

The background art fails to disclose all of the claimed features, as required by Section 102. For example, referring to page 1 of the specification, the background art discloses a microcomputer 11 for detecting the display type of an input video signal by analyzing frequency information of the horizontal and vertical sync signals. See page 1, lines 16-20; page 2, lines 9-13. Additionally, the monitor includes a table of image types that correspond to the detected frequency information. The table includes associated information concerning a number of dots for horizontal period, a number of backporches for a horizontal period, a number of horizontal lines for a vertical period, and a number of horizontal lines of a backporch for the vertical period.

The frequency of the horizontal and vertical sync signals transmitted from the main body 1 is compared with the frequency of the horizontal and vertical sync signals of the predetermined factory modes stored in the table. The display type is accordingly set when a match is found in the table. If there is no exact match, on the other hand, the video signal is displayed using a video type corresponding to the closest match.

Consequently, according to the background art, the display type information is not provided from the main body. Rather, the display information is stored in a table, and a frequency of the vertical and horizontal sync signals is compared to data in the table to try to determine a proper display mode. Moreover, the background art does not disclose any method or apparatus of providing a display code that designates a display type. For at least these reasons, it is respectfully submitted that the background art fails to disclose all of the claimed features. Consequently, it is respectfully requested that this rejection be withdrawn.

Claim 13 stands rejected under 35 U.S.C. § 103(a) over Arai. This rejection is respectfully traversed.

Arai fails to teach or suggest all the claimed features, as required by Section 103. For example, claim 13 depends from claim 12. Furthermore, Arai is discussed above as it pertains to claim 12. As discussed above, Arai fails to disclose all of the claimed features of claim 12. Consequently, it is respectfully submitted that Arai cannot establish a prima facie case of obviousness. For at least this reason, it is respectfully requested that this rejection be withdrawn.

New claims 27-43 have been added, and are believed to be in condition for allowance. For example, it is respectfully submitted that none of the references of record disclose, teach, or suggest that the display code comprises a recognition code that designates a display type and data corresponding to the recognition code. Moreover, it is respectfully submitted that none of the references of record disclose, teach, or suggest that the vertical sync signal comprises a clock pulse for recognizing display type information. Consequently, Applicant submits that new claims 27-43 are in condition for allowance. Prompt examination and allowance in due course are earnestly solicited.

### **CONCLUSION**

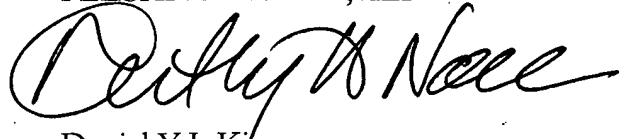
In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, Anthony H. Nourse, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

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Respectfully submitted,  
FLESHNER & KIM, LLP

A handwritten signature in black ink, appearing to read "Daniel Y.J. Kim", written over the printed name.

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**Amended Claims With Mark-ups to Show Changes Made**

1. (Amended) An apparatus for interfacing video information, comprising:  
  
a main body, which outputs a video signal and corresponding display type information, the display type information including a display code that designates a display type and; and  
  
a monitor, which detects a display type of the corresponding video signal in accordance with the display type information, and displays the video signal outputted from the main body in accordance with the detected display type.
  
2. (Amended) A video interface, comprising:  
  
a main body, which outputs a video signal through a video signal line, and outputs information relating to the video signal display type through a communication line, the information relating to the video signal display type including a display code that designates the video signal display type; and  
  
a monitor, which detects the display type of the corresponding video signal in accordance with the display information, and displays the video signal outputted from the main body in accordance with the detected display type.
  
4. (Amended) An apparatus for interfacing video information in a computer system, comprising:



a main body, which outputs a video signal, a horizontal sync signal, and a vertical sync signal, at least one of which carries video signal display type information identifying a video type of the video signal, the video signal display type information including a display code that designates the video signal display type; and

a monitor, which detects the type of display for the corresponding video signal in accordance with the display type information, and displays the outputted video signal in accordance with the detected display type.

5. (Amended) A video interface, comprising:

a main body, which provides information relative to a display type of a video signal embedded in at least one of a video signal[,], and a horizontal sync signal [and a vertical sync signal], and outputs the video signal, the horizontal sync signal, and the vertical sync signals; and

a monitor which detects the display type of the corresponding video signal in accordance with the display type information outputted from the main body, and displays the video signal in accordance with the detected display type, where in the information relative to the display type comprises a display code that designates the video signal display type.

8. (Amended) A method of interfacing video information, comprising:

transmitting video signal display type information [for] from a main body to a monitor through one of the horizontal and vertical sync signals, a video signal, and communication data, the video information display type information including a display code that designates a video display type; and

detecting a display type of the video signal transmitted from the main body using the video signal display type information, and displaying the video signal to match the display type.

12. (Amended) A method of interfacing video information, comprising:

transmitting display type information of a video signal in communication data, along with the horizontal and vertical sync signals from a main body to a monitor, the display type information including a display code that designates the video signal display type; and

detecting a display type of the transmitted video signal using the display type information, and displaying the video signal to match the display type.

14. (Amended) A method of interfacing video information, comprising:

transmitting display type information of [the] a video signal in at least one of [the] a horizontal sync signal and the video signal from a main body, the display type information including a display code that designates the video signal display type; and

detecting a display type of the transmitted video signal using the display type information.

16. (Amended) The method as claimed in claim 14, further comprising transmitting a vertical sync signal from the main body to the monitor, wherein [a] the vertical sync signal comprises a clock pulse for recognizing the display type information.

17. (Amended) A method of interfacing video information, comprising:  
dividing display type information of [a] R, G, B video [signal] signals, the display type information including a recognition code that designates the video signal display type and data corresponding to the recognition code;

embedding the divided display type information into [the] a horizontal sync signal and [the vertical sync signal] at least one of the R, G, and B video signals, respectively;

transmitting to a monitor the horizontal [and vertical] sync [signals having the divided display type information, along with the video] signal, a vertical sync signal, and the video signals;

decoding and reassembling the display type information; and

detecting a display type of the transmitted video signal using the reassembled display type information.

26. (Amended) An apparatus for interfacing video information, comprising:
- a computer transmitting horizontal and vertical sync signals, serial data signal and serial clock signals through a display data channel, and a video signal; and
  - a monitor receiving the horizontal and vertical sync signals, serial data signal and a serial clock [signals] signal through the display data channel, and the video signal, wherein a display type information of the video signal, including a display code that designates the video signal display type, is included in one of the serial data signal of the display data channel and the horizontal sync signal.

**A. Specification Paragraphs With Mark-ups to Show Changes Made**

**The following are mark-ups to show changes made to paragraph(s) starting at page 18, line 13 and ending at page 18, line 20:**

According to the video information interfacing method in a computer system according to the third embodiment of the present invention, as shown in Figure 6, the main body divides the display type information of the RGB video signal, and carries divided display type information on the horizontal sync signal, R video signal, [B] G video signal, or B video signal. By doing so, the display type information is synchronized with the vertical sync signal ③. The main body also transmits to the monitor the display type information with the clock pulse for recognizing the display type information included in the vertical sync signal. Thus the divided display type information can be embedded into the horizontal sync signal and the vertical sync signal, as well as the video signals. Additionally, the clock pulse for recognizing the display type information is preferably included in the vertical sync signal.